



## **DS51 II 50ws TTL Strobe**

Product Number 40051

### **Product Registration**

Please register your product at [ikelite.com](http://ikelite.com) within 15 days of purchase. Our product registration database is the best way for us to contact you in the event of a product update.

## **About this Product**

Thank you for your purchase of Ikelite equipment. Please read this instruction manual completely before attempting to operate or dive with this product. Please visit [ikelite.com](http://ikelite.com) to register your product to receive information on any updates or notices pertaining to your equipment.

## **Included in the Box**

- DS51 II strobe
- Diffuser # 0561.2
- Bulkhead cap # 9104.7
- 1" Ball Mount # 4081.4
- Silicone lubricant 1cc tube
- 2 year manufacturer warranty

# Specifications

Weight .....0.6kg (1.3 lbs) with batteries  
Energy Rating .....50 watt-seconds  
Coverage Angle .....70° (80° with diffuser)  
Guide Number (ISO 100) feet .....56 surface  
Guide Number (ISO 100) meters .....17 surface  
Firing Modes .....TTL, Full, -0.5, -1, -1.5, -2, -2.5  
Color Temperature .....5700K  
Power Source .....4 AA  
Flashes .....200 full power  
Recycle Time.....3.5 seconds (full power)  
Depth Rating .....90 meters (300 feet)  
CE - Compliant with applicable EU directives  
Complies with FCC part 15, subpart B, Section 15.109 for Class “B” Products

## **Important Notices**

- » **To prevent salt build-up and sticking controls, submerge the strobe in clean, freshwater. Operate the knobs several times each while underwater to flush out any residue.**
- » **Do not use cleaning agents, spray lubricants, Rain-X, or other solvents on strobe. Use of an incompatible chemical compound can damage the plastic and o-rings, and may result in leaking.**
- » **The DS51 bulkhead connector is not waterproof and must be capped when not connected to a cord or sensor. Using a DS51 underwater with the bulkhead connector uncapped or unconnected will cause the strobe to flood.**
- » **The strobe is factory sealed; do not disassemble. Disassembly will void your Ikelite DS51 limited warranty.**
- » **Do not continuously fire the strobe more than 15 times above water in rapid succession. If this does happen, allow the strobe to cool down for at least 10 minutes.**
- » **Lithium-ion batteries are NOT recommended.**

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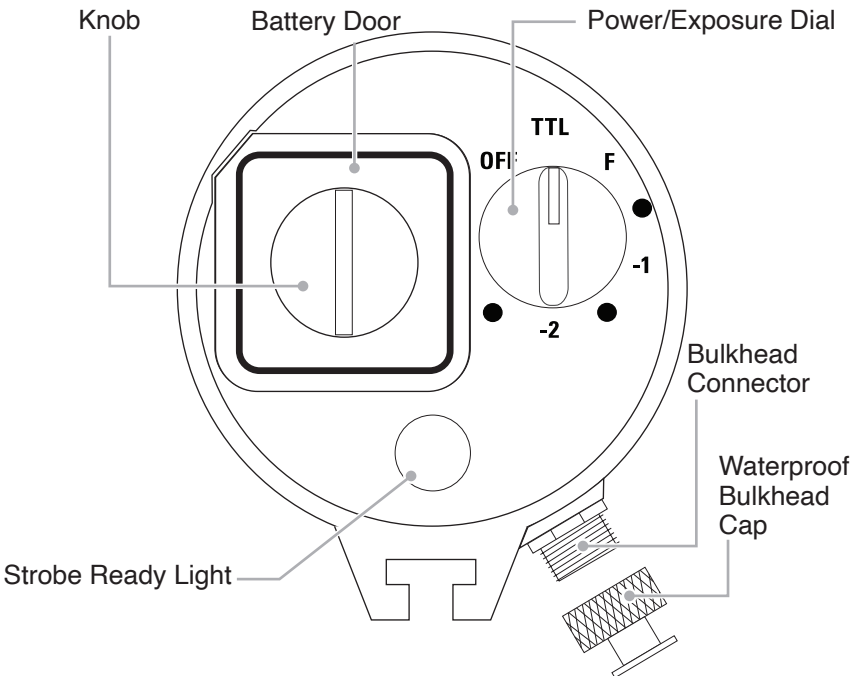
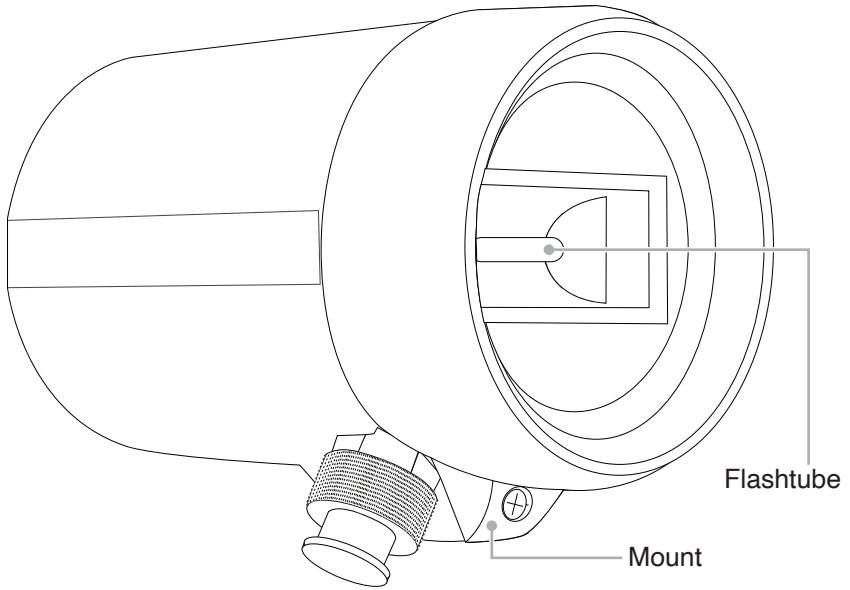
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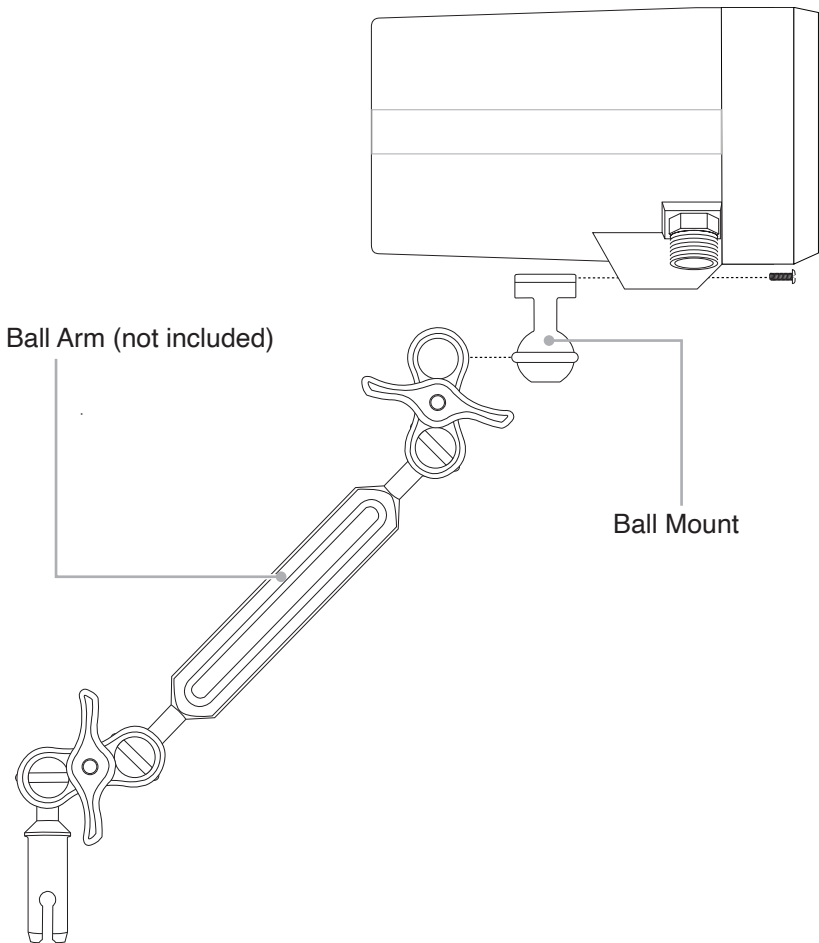
# Getting to Know Your Strobe



# Mounting the Strobe

## Ikelite Arm/Mounting System

A 1-inch diameter ball mount is included which will allow attachment to 1-inch diameter ball arms from Ikelite, TLC, Ultralight, Nauticam, and others. The ball mount may be removed for attachment of the optional Flex Arm (sold separately). For more information, visit [ikelite.com](http://ikelite.com).

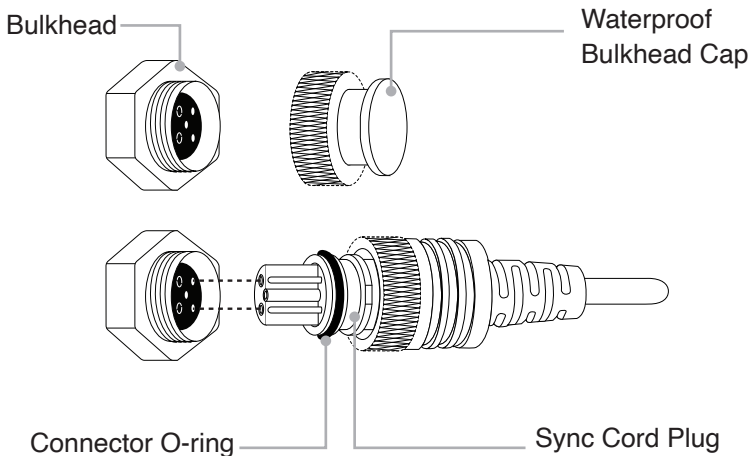




## Attaching a Sync Connector

» **A bulkhead cap or waterproof connector must be attached to the strobe for waterproof operation. Never submerge the strobe without either a bulkhead cap or compatible waterproof connector attached.**

1. Remove the bulkhead cap.
2. Lightly lubricate the connector O-ring. We recommend using only Ikelite silicone lubricant to eliminate the possibility of swelling due to incompatible compounds.
3. Line up the pins and receptacles and insert the Sync Cord Plug into the bulkhead. The plug should slide easily into the bulkhead. If you feel resistance, do not force it. Remove the plug and check alignment.

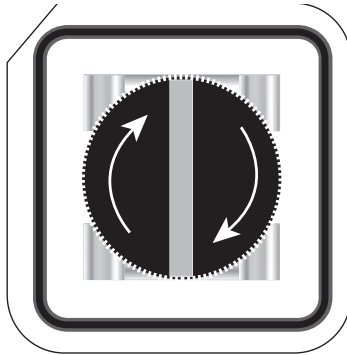


4. Rotate the knurled retaining ring until snug on the housing bulkhead. Do not use pliers or tools to tighten the retaining ring.

# Battery Compartment

## Installing Batteries

1. Rotate the strobe switch to the OFF position.
2. To access the battery compartment, rotate the knob counter-clockwise several times and gently pull the door off.
3. Install four AA-cell batteries (alkaline, NiCad, or NiMH). Refer to the “+” and “-” markings in the battery compartment to help properly install the batteries. If the batteries are installed incorrectly, it may damage the strobe’s electronics.
4. Check that the o-ring and sealing surfaces are clean. Make sure the o-ring is in the groove and free of dirt or debris. We do not recommend removing the o-ring from the groove or lubricating the o-ring.
5. Replace the battery door. Make sure the door fits into the recess around the battery compartment.



6. The o-ring seal will be visible through the battery door as the door is attached. Rotate the thumbscrew until a solid black line forms. Do not over-tighten.
- » **Do not use lithium batteries.**

- » **Tilt the rear portion of the strobe down while removing the battery door to eliminate the possibility of water droplets falling into the battery compartment after a dive.**
- » **Do not remove the knob from the battery door.**
- » **The battery compartment is sealed separately from the main electronics. Do not disassemble the strobe. Disassembly will void your Ikelite limited warranty.**
- » **Always carry spare batteries; weak batteries cause many camera and strobe problems. It's time to replace the batteries when the ready light remains dark for 15 seconds or longer after a flash.**

## **Strobe Ready Light**

The Ikelite DS51 Strobe features a ready light at the rear of the strobe that glows red when the DS51 has recycled and is ready to fire its flash again.

- » **AA batteries will provide slow recycle times as they reduce in power. If recycle times are too long, replace fresh batteries.**

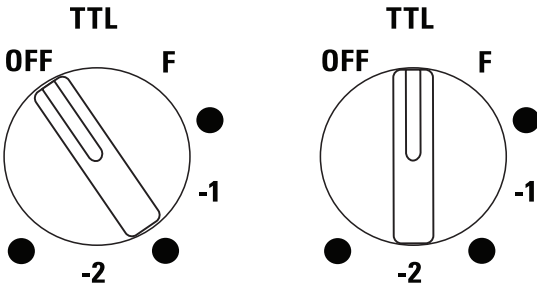
## **Power/Exposure Dial**

### **OFF position**

Always turn the strobe to OFF before connecting or disconnecting a sync cord or opening the battery compartment.

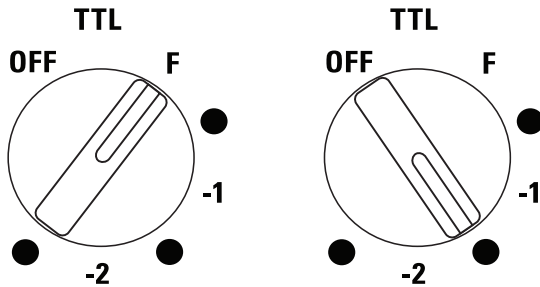
## TTL/Auto Exposure Position

This position should only be used when the strobe is attached to a compatible TTL system. When taking pictures with the mode switch in this position, the camera automatically signals the strobe to turn off when the exposure is correct.



## Manual Exposure Position

» The DS51 features six manual exposure settings in half f/stop increments: Full, -0.5, -1.0, -1.5, -2.0, and -2.5. Rotate the dial clockwise to increase strobe flash power. Rotate the dial counter-clockwise to reduce strobe flash power.

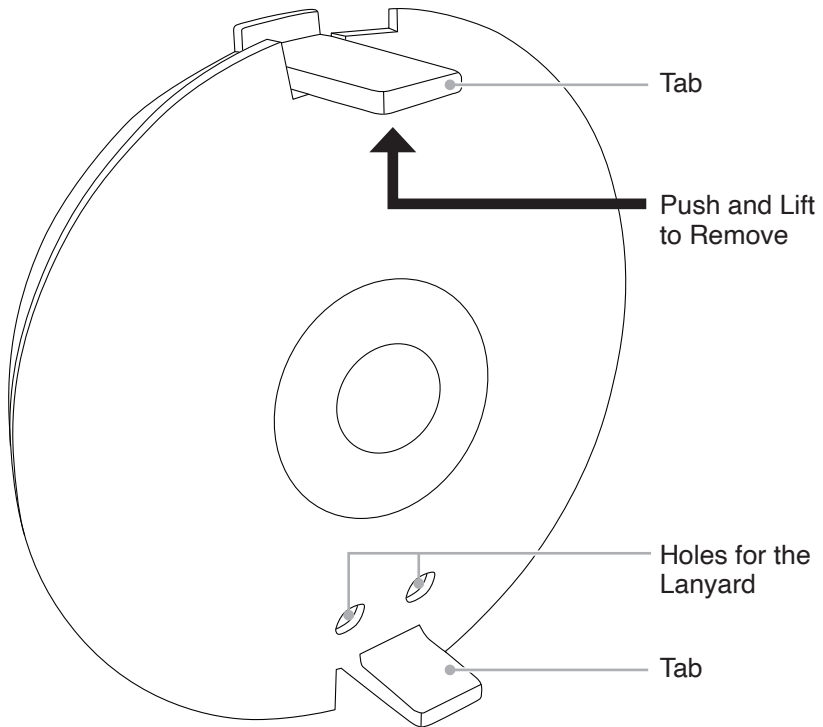


# Strobe Diffuser

## Using the Diffuser

The white diffuser can be secured to the front of the DS51 strobe when softer lighting or a coverage angle of up to 80° is desired. The diffuser reduces the DS51 light intensity by one full f-stop.

## Diffuser Installation and Removal



7. The white diffuser features two protruding tabs for use in installation and removal. The tabs on the diffuser should be positioned away from the strobe.
8. Place the diffuser over the front of the strobe. Spread the two tabs apart, insert the diffuser into the recessed front, and then rotate the diffuser until it locks into position.

9. To remove the diffuser, bend one tab out towards the edge while lifting simultaneously.
- » **A lanyard or string can be attached to the diffuser by threading it through the two circular openings near its edge. Attach the other end to the strobe arm to prevent accidental loss.**

## Maintenance

### Post-Dive

1. Always re-check o-ring seal after removing the battery door from the strobe. Most importantly, make sure the o-ring is in place prior to re-attaching the battery door.
2. Make sure the battery door is on and tightened down. Rinse your strobe in fresh water. Do not remove the sync cord prior to rinsing. Dry thoroughly.
3. Never leave your system in a fresh water rinse tank. Collisions with other peoples' gear can cause scratches or damage to your equipment.
4. Stow your system in a shaded place where it is protected from impact or overheating. If no shade is available, we recommend covering the system with a towel or cloth.

### Post-Travel and Storage

1. Rinse the exterior of the strobe with fresh water after use, especially after exposure to salt water. While rinsing, turn the mode switch to free built-up salt or debris.
2. Dry the strobe thoroughly with a clean, lint-free cloth.
3. Check the battery door o-ring and sealing surfaces for any dirt or debris. The battery door o-ring does not require lubrication.
4. Clean and lightly lubricate threads of the bulkhead connector.

5. Remove the batteries prior to storage.
6. Loosen the thumbscrew on the battery compartment door if storing the strobe for long periods of time.
7. Store in a cool, dry place.

## Troubleshooting

### Photos are over-exposed (too light)

- Adjust strobe exposure setting.
- Adjust camera aperture (smaller), shutter speed (faster), or ISO (higher).
- Move strobe(s) further away from your subject.
- Adjust exposure compensation in the camera.

### Photos are under-exposed (too dark)

- Adjust strobe exposure setting.
- Adjust camera aperture (larger), shutter speed (slower), or ISO (lower).
- Move strobe(s) closer to your subject and check aiming.

### Strobe will not fire

- Turn on strobe.
- Check the DS51 ready light. Turn the strobe's mode switch to OFF and then back to TTL. Make sure that the switch has actually clicked into position.
- Check that the batteries are inserted according to the "+" and "-" markings. It is possible to buy bad "new" batteries, so check the voltage output with a meter if possible. If using NiCad or NiMH batteries, make sure the charger is operating properly and that the batteries are fully charged.

- Check the camera settings.
- Check cable connections.
- Refer to troubleshooting at [www.ikelite.com/blogs/faq](http://www.ikelite.com/blogs/faq)

### **Strobe will not fire when using sync cord**

- Make sure the strobe is turned on.
- Try a different sync cord.
- Restore camera to factory default settings and then re-configure according to the housing instructions.

### **Strobe will not fire when using an optical sensor**

- Make sure the strobe is turned on.
- Make sure the signal flash is firing.
- Make sure the strobe sensor is pointed directly towards the signal flash.
- Move the strobe sensor closer to the signal flash.

### **Ready light does not come on**

- Charge or replace batteries.
- Make sure batteries are facing the correct direction when installed
- Make sure the strobe is turned on.

### **Backscatter or “snow” in images**

- Position strobes or lights farther away from your lens and at a slight angle.
- Avoid using strobes in extremely turbid conditions.



## Compartment Flooding

1. Air out and thoroughly dry the battery compartment with air from a blow dryer or a SCUBA tank hose.
2. Wash out the battery compartment with alcohol.
3. Air out and thoroughly dry the battery compartment with air from a blow dryer or a SCUBA tank hose.
4. Replace all batteries. Never re-use batteries that have been wet. The water could create an internal short circuit in the strobe at some later date, potentially causing an explosion.
5. Reassemble with fresh batteries.
6. After returning from your trip, send the DS51 and other system components to Ikelite for inspection and testing.

## Limited Warranty

This Ikelite product is warranted against any manufacturing defects for a period of two (2) years from the original date of purchase. Defective products should be returned to Ikelite postage paid. Ikelite will, at its sole discretion, repair or replace such products, and will return to customer postage paid. All other claims of any nature are not covered. Except as mentioned above, no other warranty expressed or implied applies to this Ikelite product.

## **Service and Repairs**

Ikelite is most interested in performing any service to ensure that all products perform as intended. Evidence of purchase date must be provided to obtain warranty service. No prior authorization is required. You may return directly to us or through your dealer. Please include a brief description of the problem, any relevant email correspondence, and/or description of the service request. Always include name, shipping address, email address, and phone number inside of the package.

Send postage paid to:

Ikelite Underwater Systems  
Attn: Service Department  
50 West 33rd Street  
Indianapolis, IN 46208 USA

For the separate international customs documentation form that you complete to accompany the shipment, please state or designate that the enclosed products were originally manufactured in the USA and are being returned to the manufacturer for repair service. Value of the equipment listed for customs purposes should be zero.

## **Contact Us**

If you have any questions about your product or need advice on getting the images you want, please contact us and we'll do everything we can to help you capture your unique perspective.

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